

57

Notice of Allowability	Application No.	Applicant(s)	
	10/666,589	JACKSON, ROGER P.	
	Examiner	Art Unit	
	Anu Ramana	3733	

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview conducted on 3/1/07.
2. ☒ The allowed claim(s) is/are 4, 5, 10, 11, 15-18, 28, 30 and 32-37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

Anuradha Ramana

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the Attorney of Record, John C. McMahon, on March 1, 2007. See attached Interview Summary Form.

The application has been amended as follows:

In the claims (see amendment filed on February 13, 2007):

In claim 10, line 23: inserted - - convex outer surfaces; the wing portions - - after "and (first occurrence)" and before "being"

In claim 10, line 25: deleted "that" and in the same line, inserted - - ; each wing surface being configured to - - after "surfaces" and before "engage"

In claim 18, line 7: replaced "is" with - - are - -

In claim 28, line 1; deleted "between"

In claim 28, line 4: replaced "be located" with - - locate said spacer - -

In claim 28, line 12: replaced "that extend" with - - having convex outer surfaces; the wings extending - -

In claim 28, line 13: deleted "are"

In claim 28, line 16: replaced ",", with - - ; - -

In claim 28, line 18: deleted "and (first occurrence)"

In claim 28, line 19: replaced "spacer" with - - wings - -

In claim 28, line 20: replaced "forward of said spacer" with - - while following the anterior curvature of respective vertebrae; - -

In claim 30, line 24: inserted - - configured to - - after "and" and before "engage"

In claim 30, line 27: inserted - - ; - - after "portions" and in the same line inserted - - wing portion having a convex outer surface and being - - after "each" and before "sized"

In claim 30, line 30: replaced "so as to be adapted to" with - - ; the end cap and wing portions being configured to support the entire anterior edges of facing vertebral surfaces of adjacent vertebrae. - -

In claim 30: deleted lines 31 and 32.

In claim 32, line 10: replaced "anterior" with - - inferior - - and in the same line deleted " ," and inserted - - and convex outer surfaces; - - after "surfaces"

In claim 32, line 11: replaced "wing" with - - the wings - -

In claim 32, line 14: inserted - - are configured to - - after "wings" and before "engage"

In claim 32, line 15: deleted "to a lateral side"

In claim 32: deleted lines 16 and 17.

In claim 32, line 18: deleted "vertebrae and extend"

In claim 32, line 20: deleted "." and inserted - - ; the end cap and wings being configured to support the entire anterior edges of facing vertebral surfaces of adjacent vertebrae. - - after "assembly"

In claim 33, line 25: inserted - - configured to - - after "and" and before "engage"

In claim 33, line 28: inserted - - ; - - after "portions" and in the same line inserted - - wing portion having a convex outer surface and being - - after "each" and before "sized"

In claim 33, line 31: replaced "so as to be" with - - ; the end cap member and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae. - -

In claim 33: deleted lines 32-34.

In claim 34, line 7: inserted - -, - - after "configured"

In claim 34, line 21: inserted - -, said thread - - after "thereon" and before "having"

In claim 34, line 30: inserted - - ; - - after "portions" and in the same line inserted - - wing portion having a convex outer surface and being - - after "each" and before "sized"

In claim 34, line 33: deleted "so as to be" and in the same line inserted - - ; the end cap member and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae. - - after "vertebrae"

In claim 34: deleted lines 34-36.

In claim 35, line 17: inserted - - and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae; - - after "curvature"

In claim 35: deleted lines 18-20.

In claim 36, line 17: inserted - - and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae; - - after "curvature"

In claim 36: deleted lines 18-20.

In claim 37, line 21: inserted - - and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae; and - - after "curvature"

In claim 37: deleted lines 22-24.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member with a top and bottom adapted to be in touching relationship with mutually facing vertebral surfaces of adjacent vertebrae; an end cap joinable with the spacer member, the end cap having a pair of wing portions extending laterally on opposite sides of the end cap; the wing portions having an arcuate curvature and convex outer surfaces; the upper and lower wing surfaces of the wing portions being configured to engage and support an anterior edge from a center to lateral sides of respective facing vertebral surfaces to maintain the intervertebral spacing between the vertebrae as set forth in claim 10.

None of the prior art either alone or in combination, teaches, discloses or suggests a method of stabilizing a pair of vertebrae including the steps of: placing a single spacer having a cylindrical profile between vertebrae in a median plane relative to said vertebrae such that a top and bottom of the spacer are in touching relationship with mutually facing surfaces of respective vertebrae; placing an end cap on the front end of the spacer, the end cap having wings extending laterally outward and having convex outer surfaces so that superior and inferior surfaces of the wings engage respective facing surfaces of the vertebrae while following the anterior curvature of respective vertebrae; such that the end cap engages the vertebrae and resists lateral rotation of the vertebrae about the spacer as set forth in claim 28.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member with top and bottom surfaces configured to touchingly engage mutually facing vertebral surfaces of adjacent vertebrae to maintain a selected intervertebral spacing therebetween; an end cap securable to the spacer member; the end cap having superior and inferior cap surfaces, the cap surfaces sized and shaped to be positioned between vertebrae and configured to engage respective facing vertebral surfaces while following the anterior curvature of a respective vertebra; the end cap including a pair of

wing portions, the wing portions having convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae as set forth in claim 30.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member with top and bottom surfaces configured to touchingly engage mutually facing vertebral surfaces of adjacent vertebrae to maintain a selected intervertebral spacing therebetween; an end cap securable to the spacer member, the end cap including a pair of laterally extending wings; the wings having superior and inferior surfaces and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae as set forth in claim 32.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member with an external thread so that the spacer member threadedly engages vertebral surfaces of adjacent vertebrae when implanted between the vertebrae; an end cap member securable to the spacer member, the end cap member including a pair of wing portions; the wing portions having convex outer surfaces; the end cap member having a superior cap surface and an inferior cap surface, the superior and inferior cap surfaces being sized and shaped to be positioned between vertebrae and configured to engage facing vertebral surfaces while following the anterior curvature of a respective vertebra; the end cap member and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae to maintain the intervertebral spacing between the vertebrae as set forth in claim 33.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member with superior and inferior vertebra engaging surfaces, each vertebra engaging surface having a thread thereon, the thread having crests that are aligned to form a partial cylindrical surface; an end cap member securable to the spacer member; the end cap member having a superior cap surface and an inferior cap surface, the superior and inferior cap surfaces being sized and shaped to be positioned between vertebrae and

configured to engage facing vertebral surfaces while following the anterior curvature of a respective vertebra; the end cap member including a pair of wing portions; each wing portion having a convex outer surface and sized and shaped as to conform to the shape of the anterior edges of the vertebrae from the median plane to the lateral sides of the vertebrae; the end cap and wing portions being configured to support entire anterior edges of facing surfaces of adjacent vertebrae as set forth in claim 34.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member configured to engage and support mutually facing vertebral surfaces; an end cap joinable with the spacer member, the end cap including a pair of wing portions extending laterally on opposite sides of the end cap; the wing portions having an arcuate curvature and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae; the end cap being removably securable to the spacer member by a resilient pawl on the end cap engaging a pawl receiving recess formed on the spacer member as set forth in claim 35.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member configured to engage and support mutually facing vertebral surfaces; an end cap with a pair of wing portions extending laterally on opposite sides of the end cap; the wing portions having an arcuate curvature and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae; the end cap being removably securable to the spacer member by a pair of resilient pawls on the end cap engaging pawl receiving recesses formed on opposite sides of the spacer member as set forth in claim 36.

None of the prior art either alone or in combination, teaches, discloses or suggests, a spinal fusion interbody spacer assembly including: a spacer member with external threads to enable threaded engagement with vertebral surfaces when implanted between the vertebrae and support central regions of mutually facing vertebral surfaces of adjacent vertebrae; an end cap with a pair of wing portions

Art Unit: 3733

extending laterally on opposite sides of the end cap; the wing portions having an arcuate curvature and convex outer surfaces; the end cap and wing portions being configured to support entire anterior edges of facing vertebral surfaces of adjacent vertebrae to maintain the intervertebral spacing between the vertebrae as set forth in claim 37.

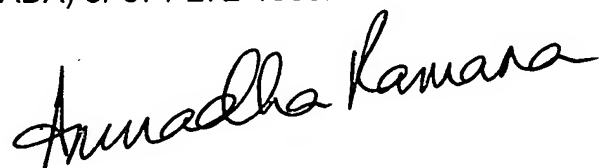
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571) 272-4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached at (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR
March 3, 2007

A handwritten signature in black ink, reading "Anu Ramana". The signature is written in a cursive, flowing style. The first name "Anu" is written with a large, stylized 'A' that loops around. The last name "Ramana" is written in a more straightforward cursive script.